Jesse Eaton

Machine Learning Scientist

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EDUCATION

Carnegie Mellon University December 2017
M.S. Computational Biology, School of Computer Science, GPA: 3.91
Tufts University May 2015
B.S. Biomedical Engineering, GPA: 3.45

SKILLS

Languages: Python, C++, C, Golang
Machine Learning: Pytorch, Sklearn, XGBoost, Flyte
Math: Algorithms, Probability, Statistics, Regression
Other: Genomics, Gcloud

EXPERIENCE

Senior Machine Learning Scientist, Freenome September 2019 - Present

- Developed core machine learning model increasing classification performance of colorectal cancer detection to industry high of 0.9 sensitivity at 0.9 specificity
- Designed important features with high signal to noise in genomics data
- Promoted iterations of important models by developing framework for model comparison
- Streamlined user model reports by redesigned reporting and model diagnostic infrastructure
- Managed ML science intern leading to development of robust kmer model pipeline

Machine Learning Research Engineer, Qeexo February 2018 - April 2019

- Generated multiple experimental company products by fusing sensor data with efficient machine learning classifiers https://www.youtube.com/watch?v=1S6irWy8G20
- Compressed gradient boosting classifier to 20 kB size for highly time/space/energy constrained environments achieving < 5ms classification time
- Increased customer awareness by demoing projects at Consumer Electronics Show 2019

Software Systems Engineer, MITRE September 2015 - August 2016

- Built web based electronic medical validation tool for Health Services Department as main engineer using Amazon Elastic Compute Cloud (AWS)

PUBLICATIONS

Jesse Eaton, Jingyi Wang, Russell Schwartz, “Deconvolution and phylogeny inference of structural variations in tumor genomic samples.” *Bioinformatics*, Volume 34, Issue 13, 01 July 2018, Pages i357–i365

Yifeng Tao, Ashok Rajaraman, Xiaoyue Cui, Ziyi Cui, **Jesse Eaton**, Hannah Kim, Jian Ma, Russell Schwartz, “Improving personalized prediction of cancer prognoses with clonal evolution models.” *bioRxiv* 761510

LEADERSHIP AND AWARDS

Culture Leader, Freenome, Jan 2022. Nominated as one of 10 culture leaders for exemplifying values
Patent for signal discovery, Freenome, April 2020. Discovered novel miRNA signal for colon cancer